



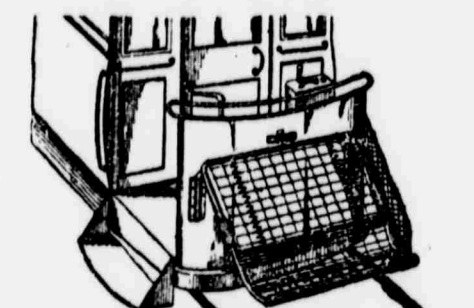
INGENIOUS CAR FENDER.

Device of a Brooklyn Man Has Some Novel Features.

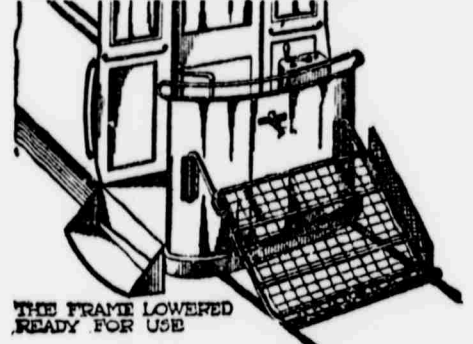
John Quern of Brooklyn has perfected a trolley car fender combining some ingenious features, says the New York Herald. The invention, unlike many of its kind, is almost as effective if it fails to work as it would be in perfect operation. It not only throws the passenger out of harm's way, but by means of springs counteracts the effects of the collision after the manner of some of the impact breakers employed on European railroads.

Primarily the invention consists of a frame of hollow tubing provided with bent down or hooked ends, which are fitted into sockets secured to the dashboard of the car. Along the metal rods glides the secondary frame or fender of tubing and wire netting, which has a roller on the lower end where it strikes the ground.

Springs are attached to the fender frame in such a way that when it is



THE FENDER WITH FRAME RAISED



THE FRAME LOWERED READY FOR USE

drawn up off the ground they are at tension. The fender is kept from dropping by means of a hook attached to the dashboard. When the emergency requires, the motorman, either with his knee or with his hand, presses a lever on his side of the dashboard which throws off the hook, and the fender, assisted by the tension of the powerful helical springs, drops quickly to the track. The roller at the end of the frame assists the wayfarer out of danger, and the springs, which are then compressed, react and resist the force of the impact between the fender and the man on the track.

In cases when the motorman has not time to press the lever which is so conveniently near, the fender section, which when not released is within a few inches of the ground, strikes the pedestrian on the leg and throws him on the net. Fatal accidents such as are caused by the car passing over the person are thereby avoided, although the person run down may suffer considerably more than he would have done had the fender been unlocked in time.

New Dressing For Wounds.
Attention is called to a new film dressing for wounds which, it is predicted, is to supersede the old skin, thin mackintosh, gum elastic and antiseptic gauze now so generally employed in surgical dressings. The film is a cellulose derivative. Its chief merit lies in the fact that it can be applied to make a perfectly hermetic dressing and one which at the same time transparent, so that the condition of the wound can be observed without disturbing the dressing.

It has been discovered, according to a writer in the Chicago Tribune, that the rose will cure a headache. Its perfume acts as a medicine upon the nerves. Its color, particularly if deep red, soothes the senses through the eyes, and its cleanliness and medicinal properties generally act upon the system not only as a curative, but as a tonic.

The sweeter the rose is the better, for the sweetness of this flower is of such peculiar delicacy that it neither cloy on the nostrils nor falls upon the senses. Other flowers with heavy scent make one languid, but the rose is invigorating, and it is known now that the concentrated rose—that is, the natural smell as obtained from roses in great quantities—will certainly act upon the person as though he or she had been fanned by a breeze.

The rose curist asserts that if the scent is inhaled directly from the heart of the flower it is more beneficial to the patient than though it were inhaled at long distance through an essence or an extract. There are different ways of administering the rose medicine. The patient can make a pillow of roses. On this she should lay her head, taking care that half a dozen of the blooms are so arranged that they point toward the face. In this attitude her nose and mouth are buried in their sweetness. The idea is to go to sleep on a bed of roses. When you wake up, your headache will be cured. The best rose is the garden rose, as it retains its red rose scent without having lost anything by being cultivated.

A Glass Eating Fungus.
According to the Lancet, a peculiar "glass disease" is said to have broken out among the windows of York cathedral. Some of the thirteenth and fourteenth century windows have already been removed with the hope that the spread of the epidemic, which appears to be due to a fungus, will be arrested. Some of the panes are perforated and eaten away to such an extent that the glass crumbles at the slightest touch.

Chemistry's Latest Triumph.
One of the latest achievements of chemistry is the discovery of a cheap process of making a certain compound that exists in tea and which has a medicinal value. The substance was formerly known as theophylline, but is now called theocine. When it is derived from the tea plant, the price is \$98 an ounce. Produced by synthetic chemistry, it is said to cost only \$2.20.

Birthplace of Type For Blind.
Raised type for the blind is usually looked upon as a comparatively recent discovery. So it is in this country. In Paris, however, such type has been in use from time immemorial.

An Antimosquito Plant.
Leaves of a plant alleged to drive away mosquitoes have reached English botanists from Africa. The presence of a single plant is stated to clear a room of the pest, and an infusion of the leaves has been found an effective substitute for quinine in the treatment of mosquito conveyed malarial fever. The plant proves to be a kind of basil, *Oidium viride*, WILL.



What are our precious metals? "Gold and silver," you answer. That depends, says the New York Herald. If by preciousness is meant the value of the product in dollars and cents—our gold and silver are not the precious metals, according to the recently issued report of the United States geological survey, which gives us the money value of the products wrested from the earth's dark laboratory in 1902.

The gold, the precious yellow metal, poured from nature's crucible in this land last year is valued at \$78,000,000, and if to this we add the metal value of the silver we have \$111,000,000. But what is that compared with the pig iron product of the same time, which is valued at \$241,000,000? The iron produced is more precious than the gold and silver combined by \$130,000,000.

Modest copper, Indian complexioned, can put the oriental luster on gold to the blush, for last year it enriched us in the sum of \$87,000,000, \$9,000,000 more than the value of the yellow metal. Even the base lead that was mined is one-third the value of the gold.

When we get to the minerals used for structural purposes, gold and silver are again distanced, for the building stone, clay and cements that were launched by us into the channels of commerce in 1902 are valued at \$182,000,000. The gold and silver produced in the same time were \$71,000,000 short of being enough to purchase this output.

When we go a little deeper and measure the value of the coal, petroleum and natural gas that we purloined from beneath the fruitful breast of Mother Earth, we find it four times that of all the gold and silver taken from the same treasure house in the same time.

Gold In Meteorites.

At a meeting of the Royal Society of New South Wales, Mr. Liverst exhibited microscopic particles of a yellow malleable metal insoluble in nitric acid presenting all the appearance of gold taken from Australian and European siderites. This suggests an inference of great interest, that the great quantity of meteoric dust is depositing gold on land and sea, the dust probably amounting each year to many thousands tons.

SMOKELESS STACKS.

Pittsburg Man Gets Patent For a Valuable Invention.

Latest in the field of smokeless stacks is a Pittsburg inventor, L. E. Tucker, who has taken out a patent. Any stack of any size six feet or more in height can, he says, be made smokeless and sparkproof. The stack is equipped with collars and drip plates running off from the edges at varying intervals for about half the height of the stack. Water is forced half way up the stack by inspirators on small boilers and by donkey pumps on large boilers, the pipes in size being regulated by the size of the stack.

The drip plates and collars start from the bottom. Water flows on the drip plates, running over the edges of the collars, which drop about half an inch toward the center, then passes through a smoke box into the funnel at the bottom with a screen to prevent the sparks from going into the pipes. The water is to be carried off into barrels or tanks and can be used again and again. The continual water flow on the drip plates prevents rust, which was first thought to be an obstacle to the usefulness of the invention.

Smoke in attempting to pass through the flowing water sheets is turned into soot, which falls to the bottom of the smoke box and is carried off by the water to the barrels, where it rises to the top of the water. The water of course prevents the escape of any sparks.

It is thought, says the Brooklyn Eagle, that this device will permit the use of bituminous coal in establishments where anthracite has been exclusively used. Sawdust or other waste material might be used, and this would result in a saving of millions of dollars in and near cities where smoke is a prohibited nuisance.

The Uses of Crude Oil.

While much has been said and written about the sprinkling of oil on roads principally as a means of preventing dust, the use of the oil in the same way on river levees in some parts of the United States is said to have been found to be an excellent protection against the burrowings of gophers and ground squirrels, which threaten the security of the barrier raised against the encroachment of the flood waters. Crude oil, says a writer in Cassier's Magazine, is so distasteful to these pests that they shun the ground covered with it.

A Consumption Antidote.

The medical faculty of Berlin is probing a peculiar observation to the effect that there is not a single consumptive among the Berlin Plaster of Paris Workers' union, many members of which were consumptive when they entered the trade, but recovered without any specific cure. Similar observations have been made in other cities among this kind of workers, which lead physicians to think that the gypsum dust kills the germs or prevents such from taking root.

An Automatic Nursegirl.

A Swiss mechanic claims to have invented an automatic baby's nurse. The apparatus is attached to a cradle. If the baby cries, air waves cause specially arranged wires to operate a phonograph, which sings a lullaby, while simultaneously clockwork is released and rocks the cradle. When the crying stops, the wires cease to vibrate, and the cradle stops rocking.

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YELLOW JACK

The conversation turned on yellow fever, and I gave my experience:

"I brought up in the harbor of Havana one fine day in June, in those days of a trim little bark. In those days there was a 'yellow fever hospital' there, and in the season merchant vessels' crews were taken by M. Jacques at so much a head by contract. If taken sick, they were cured or killed, generally the latter, without further charge, but if no contract was made, why, you paid by the day, but if ill go to the hospital you must by a Spanish ordinance.

"Well, you see, our boys commenced to go under, first one and then another, until I had hardly any one left, and to end this part I was lugged off myself to the 'Begias.' They broke the fever on me, when I began to get so hungry I could have eaten a donkey, I think, but it was no use. Soup, gentlemen, a very little bread, and that was all. I complained to the house surgeon. He spoke of relapse, fatal results, etc., but I was not satisfied with that, so I watched my chance and got a piece of cake one night at 12 o'clock. Never did anything taste so good. Then I went to sleep.

"Old 'Down Below,' as the sailors called him, used to come round every morning at 10 o'clock, and when he visited my ward I was the first one he visited.

"You have been eating," said he. I denied it, but he didn't believe me and passed on, with the cheering remark that 'I was a dead man.' I laughed, but soon after I began to feel queer. The servant looked very impatient, and I became oblivious to all surroundings in my attempt to correct him. 'I became conscious that evening when some one lifted up my eyelid and then said: 'Take him out. It's no use.' It flashed on me in a second that they were to take me out to die. When 700 or 800 are dying daily, they can't waste their time with them—at least they think they can't. I had seen many go the same road, and they never came back. So I felt the cool night breeze first, and then that sensation that is indescribable, but inseparable from a deathhouse. I was put down on my stretcher and left there to die, and I knew it. Pretty soon they brought in another one—he was lying—and then another one in the same condition. We were given up, and there was no time to waste on us. The first one in his delirium managed to get across my body and there died. My brain never was so clear as it was that night, and after the other one was dead, which soon happened, I lived my life over again.

"The old songs I used to sing came back to me, and I could sing them, so to speak, internally. Scenes long forgotten passed in review, and after I had gone through it all I thought that it was years that I had lain there, it seemed so long since I had left the bark—so long since I had heard any one speak. Gentlemen, I lived 10,000 years that night. I could feel my hand against my side as you feel with your hand asleep, as you term it. I could feel the dead man across me as though he were pressing some one else, and then by and by a slight roseate hue took my eyelids. What was it? I could not open them. Was it the translation of the soul to the other, the great unknown world beyond the dark river? I thought so. I was not afraid. I thought, 'I am dead.'

"The hue became more intense—it was the sun—and with it came the carriers of the dead. Men dying with yellow jack must be buried soon, and so they bury early those who die during the night. I was the first in. I would be the last out.

"I heard the steps of the negroes as they became fainter in their retreat.

THE SEWING MACHINE.

Unsuccessful Inventions That Preceded Howe's Patent in 1846.

The technical beginning of the sewing machine industry in this country was Sept. 10, 1846, when Elias Howe, Jr., obtained a patent for what grew into the first really practical sewing machine. Only three of the first Howe machines were made, however, and one of these was deposited in the patent office in Washington as a model. It was not until after 1850 that a factory for the making of sewing machines was built, so the enormous business of today has grown up in a short half century.

While Howe's invention marked the beginning of a successful industry, he was by no means the pioneer in efforts to substitute mechanical for hand sewing. As far back as 1770 Thomas Alsop patented in England a machine for embroidering. Another machine for embroidering in a loom was invented by John Duncan in 1804, and twenty-five years later another Englishman named Hellman patented still another embroidering machine.

The first recorded attempt at mechanical sewing was the invention of Thomas Saint, who took out a patent in England in 1790 for a machine which executed the old crochet stitch. It was not a success, but some of the features of the Saint machine appear in the perfected machine of today.

Bartholomy Thimmonier patented in France in 1880 the first sewing machine put to practical use. Eighty of his machines were in use for sewing army clothing in 1841, when a mob destroyed them because convinced they would drive seamstresses out of employment. Thimmonier built new and better machines, but all his work was again destroyed by angry artisans in 1844.

John J. Greenough took out the



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patent for a sewing machine in the United States, intended to sew leather and other practical use.

Walter Hunt of New York, a sewing machine in 1834, but protect it by a patent. His machine appeared Hunt embodied the ideas of his 1834, but he was unable his claim.

A small army of inventors after Howe's patent, successful, and their efforts to perfecting every machine. How well this is shown in the following machines and their by the United States since the fact that the American sewing machine leads all others in every country in the world.—New York Herald.

WALKS WITHOUT CRUTCHES.

I was much afflicted with sciatica, writes Ed. C. Nud, Iovaville, Sedgwick Co., Kan., "going about on crutches and suffering a deal of pain. I was induced to try Ballard's Snow Liniment, which relieved me. I used three 50-cent bottles. It is the greatest liniment ever used; have recommended it number of persons, all express selves as being benefited by walk without crutches, and form a great deal of light farm." 25c 50c and \$1.00.

Alpine Plants In Mill for

The recent expedition guaranteed Montana by the N. garden has done much of scientific study. The plants were in the various temperate regions.

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